

What is claimed is:

1. A fabric pillings evaluation method and procedure using stereovision comprising:

a step to lay the fabric specimen on the horizontally traveling table and translate the table in the right angle of the projector laser beam, scanning the surface profile of the specimen using a couple of CCD cameras and a slit laser beam projector ;

a step to reconstruct the 3D image of the fabric surface;

a step to convert the 3D image into a binary image by height-threshold algorithm and number, area and density values of the pillings acquired from the standard photographs ;

a step to calculate the horizontal position of each region of the fabric specimen and calculate the height value; and

a step to correlate the pixel shift value at the measured height with the actual height value

2. The fabric pilling evaluation method using stereovision according to claim 1, wherein the measurement includes calibrating the initial position of the apparatus before the measurement.

3. The fabric pilling evaluation method using stereovision according to claim 2, wherein the calibration includes regression between pixel shift and actual height values using calibration blocks.

4. The fabric pilling evaluation method using stereovision according to claim 3, wherein the linear regression gives regression coefficient higher than 0.95 and lower than 1.0.

5. The fabric pilling evaluation method using stereovision according to claim 3, the linear regression coefficient is 0.99.

6. A fabric pilling evaluation apparatus using stereovision composed of:

- a horizontally traveling table where the fabric specimen is laid , fixed and translated;

- a slit laser beam projector which measures the height values of the fabric specimen translated by the horizontally traveling table, with the projector being fixed in the right angle of the table;

- a couple of CCD cameras to scan the surface profile of the fabric specimen, with the cameras being fixed a little slanted to the projector;

- a controller computer to receive data for the slit laser beam projector and a couple of CCD cameras stated above and calculates the degree of pillings.